

ABSTRACT OF THE DISCLOSURE

Purification material for removing a contaminant from an impure hydride gas
5 comprising an adsorbent comprising a reduced metal oxide on a porous support and a
desiccant. The porous support may be selected from the group consisting of activated
carbon, alumina, silica, zeolite, silica alumina, titania, zirconia, and combinations thereof.
The reduced metal oxide may comprise one or more metals selected from the group
consisting of Group I alkali metals (lithium, sodium, potassium, rubidium, and cesium),
10 Group II alkaline earth metals (magnesium, calcium, strontium, and barium), and
transition metals (manganese, nickel, zinc, iron, molybdenum, tungsten, titanium,
vanadium, cobalt, and rhodium). The desiccant may be selected from the group
consisting of hygroscopic metal salts, zeolites, single metal oxides, mixed metal oxides,
and combinations thereof.

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